

REMARKS

The application has been reviewed in light of the Office Action mailed on November 16, 2004. Claims 25, 29, 33 and 37 have been amended, without adding new matter, and claims 28, 32, 36 and 40 have been cancelled. Claims 25-27, 29-31, 33-35 and 37-39 are now pending in the application. Applicants reserve the right to pursue the pre-amended and cancelled claims, and other claims, in this and other applications.

Claims 25-27, 29-31, 33-35 and 37-39 stand rejected under 35 U.S.C. § 102 as being anticipated by Yokoi et al., U.S. Patent No. 5,732,062 (hereinafter “Yokoi”). Reconsideration is respectfully requested in light of the foregoing amendments and the following reasons.

Dependent claims 28, 32, 36 and 40 are not rejected by the Office Action as being anticipated by Yokoi. And, Yokoi fails to teach or suggest, as recited in claims 28, 32, 36 and 40, a control unit for, or a step of, “linearly varying each of the write powers in proportion with a change of one of a recording linear velocity and a recording position of the storage medium.”

The subject matter of dependent claims 28, 32, 36 and 40 has been incorporated into independent claims 25, 29, 33 and 37, respectively. Thus, independent claims 25, 29, 33 and 37 recite limitations that are neither taught nor suggested by Yokoi, and are allowable over Yokoi. (Please note that by amending the independent claims Applicants are not stating that they acquiesce with the rejections set forth in the Office Action.) Claims 26, 27, 30, 31, 34, 35, 34, 35, 38 and 39 depend from claims 25, 29, 33 and 37, and contain every limitation of their base claims. The dependent claims should be allowed for at least the same reasons as for allowance of their base claims, and also because the unique combinations recited in the dependent claims are neither taught nor suggested by Yokoi.

Claims 25-28 and 33-36 stand rejected under 35 U.S.C. § 102 as being anticipated by Kimura et al., U.S. Patent No. 5,815,477 (hereinafter “Kimura”). Reconsideration is respectfully requested based on the following reasons.

An embodiment of the invention will be explained with reference to Figure 11 and associated text of the specification. According to an embodiment of the invention, a control unit 10 supplies writing data S1 to a recording pulse pattern generator 12. The recording pulse pattern generator 12 then allocates, individually, two or more discrete write powers to respective pulses that comprise a recording pulse pattern S2. The recording pulse pattern S2 is sent to a pickup 14, which writes information to an optical disk by emitting a writing light beam.

Prior to being sent to the pickup 14, the two or more discrete write powers are linearly varied, by a power control unit 22, in proportion with a change of the recording linear velocity or the recording position of the storage medium. Accordingly, two or more discrete write powers are individually allocated to the respective pulses of the recording pulse pattern S2, so that the recording pulse pattern can be optimized.

The claimed invention utilizes a concept in which each of the optimum write powers W1 and W2 can be expressed as a continuous linear function of the recording linear velocity. See, for example, Figure 6 and page 31, lines 4-7 of the specification. Also, even if the recording linear velocity or the recording position of the storage medium change, a recording pulselwidth is based on a recording frequency and set to a fixed value. Hence, it is unnecessary to control the recording pulselwidth (although control of the recording pulselwidth may be performed). See, for example, page 17, line 1, through page 19, line 15.

According to amended claim 25, an optical recording method comprises “allocating two or more discrete write powers to a single recording pulse pattern; [and] supplying the recording pulse pattern to the optical storage medium.” Claim 25 further

recites “linearly varying each of the write powers in proportion with a change of one of a recording linear velocity and a recording position of the storage medium.”

Kimura fails to teach or suggest these claim limitations. Kimura relates to a write test method for use in a recording process, and discloses conducting a write test in order to vary the recording power of a semiconductor laser by linear approximation according to the radial position of a disk. See figures 4-6, and column 9, lines 40-46. However, at column 9, lines 46-49, Kimura teaches that the write test may be conducted at every exchange of a disk, or prior to each information recording, or periodically at predetermined intervals. This is due to the complicated nature of conducting Kimura’s test, as shown in Figures 4-6 and their associated text.

Regarding the limitation underlined above, the Office Action states “see Fig. 9 and its respective disclosure.” Office Action, page 3. In the referred-to disclosure, Kimura states that “[i]n case the linear velocity varies ..., it is necessary to accordingly vary the recording power of the semiconductor laser.” Kimura further discloses that “[i]n such case, ... the values of [power levels] PL1, PH1 and PH2 obtained in respective positions are stored ... and used to vary the actual PL1, PH1 and PH2 values by linear approximation according to the radial position of the disk.” Column 9, lines 34-46.

This fails to teach or suggest “allocating two or more discrete write powers to a single recording pulse pattern; ... [and] linearly varying each of the write powers in proportion with a change of one of a recording linear velocity and a recording position of the storage medium” as recited in amended claim 25. For at least this reason, claim 25 and claims 26 and 27 dependent therefrom are believed to be allowable over Kimura.

Claim 33 has been amended to recite an optical recording apparatus comprising a “write power allocating unit for allocating two or more discrete write powers to a single recording pulse pattern; [[and]] a recording pulse pattern supplying unit for supplying the recording pulse pattern to a pickup.” Claim 33 further recites a “write power control unit for linearly varying each of the write powers in proportion with a change of one of a

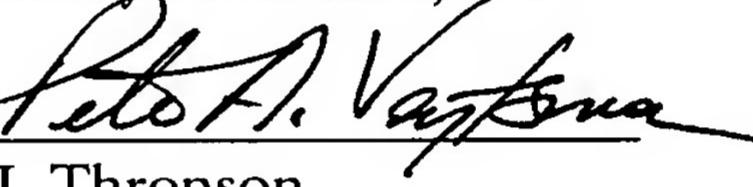
recording linear velocity and a recording position of the storage medium.” For the reasons discussed above with respect to claim 25, claim 33 and claims 34 and 35 dependent therefrom are believed to be allowable over Kimura.

Claims 32 and 40 stand rejected under 35 U.S.C. § 103 as being unpatentable over Yokoi in view of Kimura. Claims 32 and 40 have been cancelled, and the subject matter thereof has been incorporated into independent claims 29 and 37, respectively. Please note that, as discussed above, claims 29 and 37 are allowable over Yokoi, and Kimura adds nothing to Yokoi to remedy its deficiencies with respect to claims 29 and 37.

In view of the above amendments and remarks, Applicants believe the pending application is in condition for allowance.

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